

SPECIFICATIONS PURSUANT TO CT2.35# - DESIGNATION OF TIMBER AND  
SUBDIVISION/PAYMENT UNIT BOUNDARIES

Timber Designation Table

Unit/ Subdivision/Area/Pay ment Unit	Tree Paint Color	Designation or Specification
Sale Area	Blue	<u>Roadside Hazard Tree.</u> Notwithstanding BT2.32 all dead and unstable live trees which are leaning towards a road or are otherwise hazardous to a road, and are sufficiently tall to reach Purchaser's landings or the roadbed of National Forest System roads within Sale Area, shall be felled by Purchaser when Marked in the specified paint color above and below stump height by Forest Service in advance of felling any other timber in the vicinity. Pieces meeting Utilization Standards from such dead and unstable live trees shall be removed unless Purchaser is notified in writing that removal would cause unacceptable damage to areas requiring special protection such as residual timber, roads, administrative sites, streamside management zones, and areas identified on Sale Area Map or on the ground.
13,36,37,38,39, 40,41,43,44,45,46,47,4 8,51,55,56,58 59,61,63,64,65,66 67,69,71	Green	<u>Individual Tree Mark.</u> Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
24,25,30,31,32,33,34,3 5,53,60,62,70	Orange	<u>Leave Tree Mark.</u> All live trees are designated for cutting unless Marked as leave trees. Leave trees are Marked above and below stump height with the specified paint color. Sale Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut.
		<u>Salvage Area.</u> In addition to Roadside Hazard Trees, other dead and dying timber standing or down that meets the size specification in AT2, may be designated for cutting in Salvage Areas shown on the Sale Area Map when Marked with the specified paint color in advance of felling other timber in the vicinity.
Sale Area	Orange W	<u>Wildlife Trees.</u> Notwithstanding the designation for cutting under BT2.31, BT2.33, BT2.34, or BT2.35, trees which are identified by standard Forest Service metal wildlife tree sign or painted with the specified paint color on the uphill and downhill side, shall be left uncut. In event such trees are destroyed in Purchaser's Operations, Forest Service may designate alternate trees to be saved.
All units for pine, white fir and incense cedar 3.0"-9.9" DBH		<u>Designation by Spacing CT2.351#</u>
All units for Juniper		<u>Designation by Species and Diameter, CT2.352#</u>
		<u>Designation by Damage Class, CT2.353#</u>
		<u>Designation by Row Spacing, CT2.354#</u>

Subdivision/Payment Unit Boundary Designation Table

<u>Subdivision/Payment Unit</u>	<u>Boundary Paint Color</u>	<u>Boundary Designation</u>
13,24,25,30,31,32,33, 34,35,36,37,38,39,40, 41,43,44,45,46,47,48, 51,53,55,56,58,59,71	White	Boundary trees are designated with three vertical stripes of white tracer paint with the center stripe facing into the unit with the remaining stripes facing the adjoining boundary trees. Stumps are marked with white tracer paint at ground level.
60,61,62,63,64,65,66, 67,69,70	Orange	Boundary trees are designated with three vertical stripes of orange tracer paint with the center stripe facing into the unit with the remaining stripes facing the adjoining boundary trees. Stumps are marked with orange tracer paint at ground level.

Tree Designation Table – CT2.352#

Subdivision(s) or Cutting Unit(s)	Designated Species <u>1/</u>	More than Stump Diameter (inches) <u>2/</u>	Less than Stump Diameter (inches) <u>2/</u>
All	Juniper	4	28

<u>Code</u>	<u>Use Limitations</u>
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

#### Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
43N79	N/A	Unit 37	Unit 56	X	Botany concerns
N/A	Road paralleling Railroad	T43N,R8E, section 27	46N10	P	RR Right of Way

## Contract Road Maintenance Requirements Summary

[illegible]

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications									
	From	To		801	802	803	804	805	806	807	808	809	810
46N10	SH139	43N16	3.5			P			P				
46N10E	46N10	Unit 71	.25			P			P				
43N16	46N10	Unit 39	4.2			P			P				
43N80	43N16	Unit 39	1.05			P			P				
43N93	43N16	43N91	.6			P			P				
43N64	43N16	43N52	1.35			P			P				
43N63	43N16	Unit 35	1.25			P			P				
43N63	43N16A	Unit 31	.2			P			P				
43N63	Unit 31	43N62	.15			P			P				
43A16B	43N16	Unit 25	.45			P			P				
43N16A	43N16	43N63	.5			P			P				
43N62	43N16	43N62A	.9			P			P				
43N62	43N62A	43N63	.9			P			P				
43N62	43N63	Unit33	.35			P			P				
43N62A	43N62	Unit 31	.5			P			P				
43N52	Unit 32	43N63	.15			P			P				
43N52	43N64	43N79C	2.10			P			P				
43N52	43N79C	Unit 35	.25			P			P				
43N52A	43N52	Unit 35	.8			P			P				
43N79C	43N79	43N52	.9			P			P				
43N52	43A52C	43N77	.85			P			P				
43N77	46N10	43N79	1.85			P			P				
43N77	43N79	Unit 51	.55			P			P				
43N79	46N10	43N77	1.75			P			P				
43N79	43N77	Unit 56	.5			P			P				
43N79	43N79C	Unit 37	.8			P			P				
43N79E	43N79	Unit 43	1.4			P			P				
42N60	139	42B60FC	2.15			P			P				
42N21	42N60	42N07B	.1			P			P				
42N07B	42N21	Unit 70	.15			P			P				
42B60A	42N60	End	.11			P			P				
42B60B	42N60	Unit 69	.3			P			P				
42B60FC	42N60	Unit 61	.25			P			P				
42N06	46N10	Unit 71	.5			P			P				
All Temp	Start	Finish							P				
Existing Non System Roads	Start	Finish							P				

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

[illegible]

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SPECIFICATIONS PURSUANT TO CT5.35# -  
REQUIREMENTS OF ROAD AND WATER SUPPLY USE

Load Limitations	<p>Purchaser shall notify Forest Service in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation under BT6.311. Within 15 days after receipt of the written notice Forest Service shall notify Purchaser in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities.</p> <p>A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.</p>
Existing Non-National Forest System Roads	<p>Roads not shown on Sale Area Map may be used as Temporary Roads if there is agreement before use is started.</p>
Snow Removal	<p>If Purchaser removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources.</p> <p>Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils.</p> <p>Snow must not be removed to the road surface. A minimum &lt; 3 &gt; inch snow depth must be left to protect the roadway. If the road surface is damaged, Purchaser shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing.</p> <p>Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with intervisible turnouts.</p>



Water Supply Deposits	<p>If Purchaser utilizes the water site located at Lime Pit in T42N; R9E; NW ¼ section 6 , for any listed activity, Purchaser shall make deposit with Forest Service for that activity at the time and in the amount shown in the Water Supply Deposit Schedule table below.</p> <p style="text-align: center;">WATER SUPPLY DEPOSIT SCHEDULE</p> <table><tr><th>Activity</th><th>Unit of Payment</th><th>Unit Cost</th><th>Total Cost</th><th>Time of Payment</th></tr><tr><td>N/A</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	Activity	Unit of Payment	Unit Cost	Total Cost	Time of Payment	N/A																																																																																				
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Surface Replacement Deposits	<p>Purchaser shall make Required Deposits for deferred surface replacement (16 U.S.C. 537) for use of existing surfaced roads. If applicable, such deposits shall be based upon the volume and distance hauled on the roads and at the applicable rates listed in the table below titled Surface Replacement Deposit Schedule. If Purchaser uses surfaced roads under jurisdiction of Forest Service other than those listed, Forest Service may establish applicable rates for such surfaced roads.</p> <p style="text-align: center;">SURFACE REPLACEMENT DEPOSIT SCHEDULE</p> <table><tr><th>Road No.</th><th>From</th><th>To</th><th>Miles</th><th>Rate</th></tr><tr><td>42B60FC</td><td>Unit61</td><td>42N60</td><td>.25</td><td>\$0</td></tr><tr><td>42B60B</td><td>Unit 69</td><td>42N60</td><td>.30</td><td>\$0</td></tr><tr><td>42B60A</td><td>Unit 62</td><td>42N60</td><td>.11</td><td>\$0</td></tr><tr><td>42N07B</td><td>Unit 70</td><td>42N21</td><td>.15</td><td>\$0</td></tr><tr><td>42N21</td><td>42N07B</td><td>42N60</td><td>.1</td><td>\$0</td></tr><tr><td>42N60</td><td>42B60FC</td><td>Unit 70</td><td>1.85</td><td>\$0</td></tr><tr><td>42N60</td><td>Unit 70</td><td>139</td><td>.3</td><td>\$0.01/CCF</td></tr><tr><td>43N80</td><td>Unit 39</td><td>43N16</td><td>1.05</td><td>\$0</td></tr><tr><td>43N93</td><td>Unit 24</td><td>43N16</td><td>.6</td><td>\$0</td></tr><tr><td>43N64</td><td>43N52</td><td>43N16</td><td>1.35</td><td>\$0</td></tr><tr><td>43N63</td><td>Unit 35</td><td>43N16</td><td>1.25</td><td>\$0</td></tr><tr><td>43A16B</td><td>Unit 25</td><td>43N16</td><td>.45</td><td>\$0</td></tr><tr><td>43N16A</td><td>43N63</td><td>43N16</td><td>.5</td><td>\$0</td></tr><tr><td>43N16</td><td>Unit 39</td><td>43N93</td><td>.6</td><td>\$0</td></tr><tr><td>43N16</td><td>43N93</td><td>46N63</td><td>.45</td><td>\$0.01/CCF</td></tr><tr><td>43N16</td><td>46N63</td><td>43A16B</td><td>.6</td><td>\$0.03/CCF</td></tr><tr><td>43N16</td><td>43A16B</td><td>43N16A</td><td>1.3</td><td>\$0.06/CCF</td></tr></table>	Road No.	From	To	Miles	Rate	42B60FC	Unit61	42N60	.25	\$0	42B60B	Unit 69	42N60	.30	\$0	42B60A	Unit 62	42N60	.11	\$0	42N07B	Unit 70	42N21	.15	\$0	42N21	42N07B	42N60	.1	\$0	42N60	42B60FC	Unit 70	1.85	\$0	42N60	Unit 70	139	.3	\$0.01/CCF	43N80	Unit 39	43N16	1.05	\$0	43N93	Unit 24	43N16	.6	\$0	43N64	43N52	43N16	1.35	\$0	43N63	Unit 35	43N16	1.25	\$0	43A16B	Unit 25	43N16	.45	\$0	43N16A	43N63	43N16	.5	\$0	43N16	Unit 39	43N93	.6	\$0	43N16	43N93	46N63	.45	\$0.01/CCF	43N16	46N63	43A16B	.6	\$0.03/CCF	43N16	43A16B	43N16A	1.3	\$0.06/CCF
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42B60FC	Unit61	42N60	.25	\$0																																																																																							
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	43N16	43N16A	43N62	1.0	\$0.06/CCF
	43N16	43N62	46N10	.25	\$0.01/CCF
	42N62	43N63	43N16	1.8	\$0
	43N62	Unit 33	43N63	.35	\$0
	43N63	Unit 31	43N16A	.2	\$0
	43N63	Unit 31	43N62	.15	\$0
	43N62A	Unit 31	43N62	.5	\$0
	46N10	43N16	43N35	.35	\$0.02/CCF
	46N10	43N35	43N77	.8	\$0.06/CFF
	46N10	43N77	46N10E	1.2	\$0.11/CCF
	46N10	46N10E	43N79	.15	\$0.01/CCF
	46N10	43N79	139	1.0	\$0.09/CCF
	46N10E	Unit 71	46N10	.25	\$0
	43N79	46N10	43N77	1.75	\$0
	43N79E	Unit 43	43N79	1.4	\$0
	43N79	Unit 56	43N77	.5	\$0
	43N79	Unit 37	43N79C	.8	\$0
	43N79C	43N79	43N52	.9	\$0
	43N77	46N10	43N79	1.85	\$0
	43N77	43N79	Unit 51	.55	\$0
	43N52	Unit 32	43N63	.15	\$0
	43N52	43N64	43N79C	2.1	\$0
	43N52	43N79C	Unit 35	.25	\$0
	43N52A	43N52	Unit 35	.8	\$0
	Sale Area Average Rate: \$ <u>0.47</u> / CCF				

SCHEDULE PURSUANT TO CT6.315# - SALE OPERATIONS SCHEDULE (8/2006)

<b><u>Subdivision/ Area/Unit</u></b>	<b><u>Conditions of Operation</u></b>	<b><u>Purpose</u></b>
Unit 30 and 53	Unless otherwise agreed, Purchaser operations are prohibited between February 15 and September 15 within ¼ mile of Controlled Area. If the historical nest is unoccupied then the limiting operating period (LOP) will apply to the protected activity center (PAC) until surveys determine if an alternate nest location exists.	To avoid interfering with active Goshawk nests
Unit 41,44,46, 63 and 66	Unless otherwise agreed, Purchaser operations are prohibited between March 1 and August 31 within 1/8 to 1/2 mile of Controlled Area. If the historical nest is unoccupied then the limiting operating period (LOP) will apply to the protected activity center (PAC) until surveys determine if an alternate nest location exists.	To avoid interfering with active Osprey nests
All payment units that will be impacted by either hauling skidding or the movement of equipment over the Tuscarora Pipeline.	<p>Prior to performing any work along the pipeline corridor contact Jake Derner of Tuscarora Pipeline at 640-2969.</p> <p>Padding of Tuscarora pipeline crossings will be completed by purchaser prior to moving equipment or hauling on any units that impact the pipeline.</p> <p>Duncan Pit, T42N, R9E, NW ¼ sec. 22 off the 42N06 rd.is the location for padding material. Use the pit run.</p> <p>The east end of 43N77 road requires a minimum depth of 1/2 foot compacted fill over the pipeline to meet specifications.</p> <p>All other road crossings of the pipeline require a minimum depth of 1 foot compacted fill to meet specifications.</p> <p>Any other pipeline crossing will need to be checked by pipeline personnel to determine coverage.</p> <p>FS road 46N10 has adequate depth and can be bladed over the pipeline.</p>	Prevent damage to natural gas pipeline.

SPECIFICATIONS AND TREATMENTS PURSUANT TO CT6.41# -  
FELLING, BUCKING AND LIMBING

<u>Treatment Method and</u> <u>Applicable Map Symbol</u>	<u>Felling, Bucking and Limbing Specifications</u>
Limbing	Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided by BT6.414, Purchaser shall, prior to skidding/yarding operations, cut exposed limbs from products which are to be skidded/yarded. Such limbing of stems shall be done to a top diameter of approximately n/a inches, at which point the top shall be cut from the remainder of the stem.
No Lop "No Lop"	Within units or subdivisions designated NO LOP on Sale Area Map, trees shall be skidded/yarded to agreed landing locations prior to lopping.
Whole Tree Yarding "Whole"	Notwithstanding the requirements above, within units or subdivisions designated "Whole" on Sale Area Map, trees smaller than 22 inches DBH shall be skidded/yarded to agreed landing locations prior to limbing, bucking, and lopping. Trees larger than or equal to 22 inches DBH shall be bucked into two or more pieces with the butt portion being no longer than 41 feet prior to skidding/yarding. The butt log shall be limbed prior to skidding/yarding.
Directional Felling "DF"	Within areas designated DF on Sale Area Map, Included Timber shall be directionally felled away from travel routes, private property lines, fences, controlled areas, streamside management zones, wet meadows, powerlines, Tuscarora Pipeline corridor and railroad right of way with the use of specialized equipment. Such directional felling shall not be required when in the faller's judgment it is unsafe to do so, and shall be left standing.
Treatment of Stumps "TS"	<p>Within areas shown on Sale Area Map, Purchaser shall treat stumps of all live pine and juniper trees equal to or greater than 14 inches stump diameter, (measured inside bark) unless otherwise agreed in writing. Treatment shall be with a borate compound registered by EPA in the State of California for prevention of annosus root disease.</p> <p>Treatment shall consist of removal of sawdust and other loose debris from the cut surface of the stump and application of a thin layer of the borate compound uniformly over the entire cut surface, including exposed wood surfaces on the stump sides, at the rate specified on the product label. Any surface irregularities on the stump preventing application of a uniform layer of borate compound shall be cut level prior to treatment. Unless waived in writing, Purchaser shall also apply an approved colorant mixed with the borate compound to insure complete coverage. Treatment should be done as soon as possible but shall be completed no later than 4 hours after felling, otherwise stumps shall be re-cut and treated.</p>

	<p>Purchaser shall not apply borate compound during heavy rain fall or when such precipitation rate is predicted within 4 hours of application to cause borate compound to be flushed off the stump and become ineffective, in that case treatment shall be reapplied. Application shall be completed within 24 hours of the precipitation having ceased. Borate compound also shall not be applied to stumps located within 100 feet of live streamcourses and meadows/wetlands shown on Sale Area Map and/or ___50 feet of sensitive plant location boundaries as flagged on the ground.</p> <p>Purchaser shall provide the borate compound and colorant and apply it in compliance with the State of California laws and regulations pertaining to pesticides and pest control operations. Borate compound storage shall be located such that any spillage will not contaminate water. All spills shall be promptly cleaned up and spilled material disposed of according to the product label. All spills occurring in water or over 25 pounds shall be reported to Forest Service within 24 hours.</p> <p>Purchaser shall submit at the end of each month a “Monthly Summary of Pesticide Use Reports” to the appropriate County Agricultural Commissioner with a copy to the District Ranger.</p>															
Maximum Log Length	<p>Cut trees shall be bucked prior to skidding so that resulting logs shall not exceed the maximum log length including trim allowance shown in following table:</p> <table><tr><td>Unit Number</td><td>Maximum Log Length</td></tr><tr><td>All</td><td>41’</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Unit Number	Maximum Log Length	All	41’											
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Minimum Stump Height	<table><tr><td>Unit/Subdivision</td><td>Minimum Stump Height (inches)</td><td>Purpose or Reason</td></tr><tr><td>All</td><td>4”</td><td>Accountability</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Unit/Subdivision	Minimum Stump Height (inches)	Purpose or Reason	All	4”	Accountability									
Unit/Subdivision	Minimum Stump Height (inches)	Purpose or Reason														
All	4”	Accountability														

## Ground-Based Skidding Table - CT6.42#

Map Symbol	Requirements
<b>TRAC</b>	<p>Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. Purchaser shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding.</p> <p>Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain.</p>
<b>SUSP</b>	Products shall be skidded with leading end clear of ground.
<b>SPACE</b>	Skid roads will average <u>  NA  </u> feet from center to center, except where converging.
<b>ENDL</b>	Endlining shall not be required for distances in excess of <u> 75 </u> feet uphill, and <u> 75 </u> feet downhill.
<b>MAX</b>	Tractors used for skidding outside Clearcutting Units, regeneration units or other authorized clearings, shall be of the type (rubber-tired or track-laying) shown on the Sale Area Map and shall not exceed the overall width designated on Sale Area Map.
<b>MH</b>	<p>Purchaser shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least <u> 20 </u> feet for bunching trees, capable of severing, lowering and placing trees up to <u> 24 </u> inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to <u> 30 </u> %.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage.</p> <p>Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of BT6.41 - Felling and Bucking, CT6.41# - Felling, Bucking, and Limbing Requirements and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>
<b>CTL</b>	<p>Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Limbs of Included Timber shall be placed evenly in the machinery skid trail prior to product removal. The harvester shall be an all-wheel drive machine with at least 3 axles and a processing head mounted on a boom having a minimum-operating radius of 20 feet.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from unnecessary damage.</p> <p>All Products shall be removed by an all-wheel drive forwarder with at least 3 axles capable of self-loading and unloading. The forwarder shall carry all products free of the ground during removal. The loading crane shall have a minimum-operating radius of 15 feet. Log landings and transfer points shall be agreed in advance of harvesting.</p> <p>Included Timber exceeding the harvester's capability may be felled by conventional chainsaw methods, forwarded to nearest skid trail and processed into a finished Product with harvester or chainsaw, consistent with the requirements BT6.61 - Meadow Protection, BT6.41 - Felling and Bucking, CT6.41# - Felling, Bucking, and Limbing and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>

SPECIFICATIONS PURSUANT TO CT6.6# - EROSION PREVENTION AND CONTROL.

Vegetative Soil Stabilization Where soil has been disturbed by Purchaser's Operations and the establishment of vegetation is needed to minimize erosion, Purchaser shall take appropriate measures normally used to establish an adequate cover of grass or other vegetation acceptable to Forest Service or take other agreed stabilization measures. Forest Service shall designate on the ground such disturbed areas annually as logging and Temporary Road construction are completed.

Forest Service upon request shall provide advice as to soil preparation and the application of suitable seed mixtures, mulch and fertilizer and the timing of such work. In no event shall Purchaser be required to treat more acres than that shown in the legend of Sale Area Map.

Purchaser shall use the type of native seed mixtures, mulch, and fertilizer as listed below:

Seed Mix	Pounds/Acre	Type of Mulch	Fertilizer

Special Erosion Prevention Measures Purchaser shall give adequate treatment by spreading slash or wood chips or by agreement giving other treatment to portion of tractor roads, skid trails, landings, cable yarding corridors, tractor-end lined corridors and Temporary Road fills where necessary to supplement other erosion prevention measures required elsewhere in this contract. In no event shall Purchaser be required to treat more acres than that shown in the legend of Sale Area Map. The specific locations to be treated shall be designated on the ground by Forest Service. These special erosion prevention measures are to be done within the same date and time periods as stated above.

Soil Scarification. In addition to meeting the requirements of BT6.63 and BT6.64, Purchaser shall scarify the following areas; unless otherwise agreed:

- (a) Traveled Way of National Forest System roads used by Purchaser and listed in the legend of Sale Area Map.
- (b) Roadbeds of any Temporary Roads used for log hauling by Purchaser.
- (c) Landings or portions thereof located outside Roadbed limits of National Forest System roads not designated for scarification.

Scarification shall be to a depth of 6 inches, with intervals between striations not to exceed 12 inches, unless otherwise agreed.

Backblading Within recreation development sites and public use areas designated on Sale Area Map, Purchaser shall, at Forest Service request, backblade skid trails in lieu of cross ditching.

Tillage In addition to meeting the requirements of BT6.64, unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.

Tillage shall be accomplished by equipment that will lift and fracture the soil by vertical and lateral shattering, leaving soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted.

Tillage depth is shown in the following table. Agreement in writing may be made to a lesser depth if rocks or other limiting site conditions are encountered.

Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Purchaser and Forest Service shall agree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.

Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat
Landings		
Main Skid Roads and Tractor Roads designated by Forest Service		
Temporary Roads		



## CT6.7# - Slash Treatment Methods

<u>Symbol</u>	<u>Method</u>	<u>Definition</u>
Buck-L	"Bucking Large Logging Slash"	Tops and limbs over 4 inches diameter outside bark (d.o.b.), not to be otherwise treated, shall be bucked into lengths not to exceed 6 feet, unless agreed otherwise.
Buck-P	"Bucking and Piling"	Logging Slash smaller than <NA> inches and larger than 4 inches in large end d.o.b. shall be bucked into lengths not to exceed <NA> feet and left in place. Logging Slash 4 inches and smaller in large end d.o.b. shall be hand Piled within Required Disposal Strip for Forest Service disposal.
Bury	"Burying"	Logging Slash shall be buried where agreed in borrow areas, pits, trenches, or other locations reasonably near the area of origin. Logging Slash shall be matted down in layers and shall be covered with at least 2 feet of rock and soil so that the final surface is sloped to drain and relatively smooth.
Chip	"Chipping"	Chippable Logging Slash up to 4 inches in d.o.b. shall be processed through a chipping machine. Chips shall be scattered to a loose depth not exceeding 6 inches.
Deck	"Decking" large material	Logging Slash <> inches or larger in large end d.o.b. and <> feet or more in length shall be Decked for disposal by Forest Service by piling pieces parallel to each other.
Mach	"Machine Piling"	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled by tractor equipped with brush rake for disposal by Forest Service.
Pile	"Piling" small material	Logging Slash smaller than < NA > inches in large end d.o.b. and < NA > feet long shall be hand Piled for disposal by Forest Service.
Remove	"Removing"	Logging Slash shall be moved or hauled to locations shown on Sale Area Map and designated on the ground where it shall be piled for disposal by Forest Service.
Scat 18" Scat 30"	"Scattering"	Logging Slash shall be scattered to reduce slash concentrations with slash being generally left within 18 or 30 inches of the ground as shown on Sale Area Map. Logging Slash shall be scattered into openings away from and without unnecessary damage to residual trees. All scattered logs shall be limbed, placed away from trees and positioned so they will not roll. When Scattering is specified, another method may be used by agreement.
Stack	"Stacking" small material	Logging Slash <NA> inches or smaller in large end d.o.b. and <NA> feet or more in length shall be stacked for disposal by Forest Service by piling pieces parallel to

each other.

View                      “Visible Slash Treatment”                      Designated on Sale Area Map with boundaries posted on the ground are <NA> with distance limitations for visible slash treatment. Within such units and the area of visible Logging Slash adjacent thereto, Logging Slash shall be treated by Purchaser. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Sale Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.

YUMD                      “Yarding Unutilized Material-Decking”                      All unutilized material developed by Purchaser’s Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be Yarded to landings and Decked. Where this is impractical, or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)

YUME                      “Yarding Unutilized Material-Exterior Boundary”                      All unutilized material developed by Purchaser’s Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be yarded to locations a minimum of 50 feet slope distance within the exterior boundaries of such units and positioned so the yarded material will not roll.

Unit	Large End d.o.b. (in)	Length (feet)

YUML                      “Yarding Unutilized Material-Landing”                      All unutilized material developed by Purchaser’s Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be yarded to locations within 100 feet slope distance of landing. Where this is impractical, or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)

YUMR                      “Yarding Unutilized Material-Removal”                      All unutilized material developed by Purchaser’s Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be removed to locations shown on Sale Area Map and designated on the ground, or other agreed locations, and Decked.

Unit	Large End d.o.b. (in)	Length (feet)

Cover	"Covering Piles"	<p>All piles shall be covered with a durable waterproof covering as approved by Forest Service. The material shall be at least six feet in width. Piles shall not be less than fifty percent covered, with the covering extending not less than half way down all sides. Pieces of burnable material shall be placed on top of the durable waterproof covering to keep the covering from blowing off the pile.</p>
Fell	"Damaged Small Tress"	<p>Unless treated under other provisions, all trees smaller than the minimum d.b.h. in AT2, over 5 feet in height, and damaged beyond recovery by Purchaser's Operations shall be felled. Such trees shall be limbed to a stem diameter outside bark of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and shall be bucked into lengths not exceeding 20 feet.</p>
Fire-L	"Firelines"	<p>Shown on Sale Area Map and to be flagged on ground after logging by Forest Service are firelines to be constructed by Purchaser unless otherwise agreed in writing. Purchaser shall construct not more than &lt;NA&gt; chains of fireline by hand and not more than &lt;NA&gt; chains of fireline by tractor.</p> <p>Firelines constructed by hand shall be cleared of all vegetative debris larger than one inch in d.o.b. and three feet long. The width of firelines shall be at least &lt;NA&gt; feet, except across the top of cutting units where the width shall be at least &lt;NA&gt; feet. At least &lt;NA&gt; feet shall be scraped to mineral soil. In areas where there is potential for burning material to roll, the fireline shall be constructed in a trenched manner on the downhill side.</p> <p>Tractor lines shall be cleared of all vegetative debris, larger than one inch in diameter and three feet long, to a width of at least &lt;NA&gt; feet, with at least &lt;NA&gt; feet to mineral soil. No slash, brush, or other vegetative debris shall be buried in or under berms created in the construction of firelines. All limbs overhanging into the fireline, shall be removed to a minimum height of 8 feet.</p> <p>Firelines shall be completed on each unit in accordance with BT6.311 unless otherwise agreed in writing.</p>
Fuel-B	"Fuelbreaks"	<p>In subdivisions &lt;NA&gt; and shown on Sale Area Map, Logging Slash shall be scattered within &lt;NA&gt; feet slope distance of the inside edge of firelines.</p> <p>Shown on Sale Area Map, with boundaries designated on the ground, are "Fuelbreaks" of varying width. Within such Fuelbreaks all Logging slash and Construction slash shall be treated by Purchaser. Primary treatment</p>

shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these methods unless a method is specified or prohibited on Sale Area Map. Slash larger than treatment size requirements of selected or specified methods shall be scattered outside Fuelbreak, or treated as agreed.

**PILING SPECIFICATIONS.** All piles shall be reasonably compact and free of soil to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. Such Logging Slash shall be bucked into lengths not exceeding ten feet prior to piling. Maximum width of tractor, with brush rake attached, shall not exceed <NA> inches. Machine Piling is not required on areas where use of tractors would cause undue damage to residual timber or where slopes exceed <NA> percent. Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags. Piles shall be no less than four feet in height or greater than <10> feet in height. Material extending three feet or more outside the edge of a pile shall be trimmed. An eight foot fuelbreak shall be cleared of all but fine material around each Machine Pile and an 18 inch wide fireline shall be cleared to mineral soil around the outer ring of the fuelbreak. For hand piles, Purchaser shall construct a fireline cleared to mineral soil and at least 3 feet wide around each pile. In areas where there is a potential for burning material to roll, firelines, including those for Machine Piles, shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines. Trenches shall be constructed by hand unless otherwise agreed.

**UNIT AND SUBDIVISION SLASH TREATMENT SPECIFICATIONS.**

			<b><i>SLASH TREATMENT</i></b>
<b><i>Subdivision or Unit No</i></b>	<b><i>Specified Method</i></b>	<b><i>Prohibited Method</i></b>	
All	Fell	NA	

**LANDINGS AND DISPOSAL SITES.** Unutilized logs accumulated at landings and disposal sites shall be Decked by Purchaser for disposal by Forest Service. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

		<b><i>SLASH TREATMENT</i></b>	
	<b><i>Subdivision or Unit No.</i></b>	<b><i>Specified Method</i></b>	<b><i>Maximum Height of Decks</i></b>
<b><u>Landings</u></b>	All units	MACH	15 feet

**TREATMENT ALONG PERMANENT ROADS.** Permanent roads that require roadside slash treatment are listed in the attached table and shown on Sale Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Purchaser. "Required Disposal Strips" are those areas adjacent to permanent roads where slash treatment is required for resource objectives. The width of Required Disposal Strips is shown in the attached table and is measured in slope distance from Roadbed edges of permanent roads. By agreement, in Clearcutting Units and regeneration units slash from Required Disposal Strips may be treated with other Logging Slash. By agreement the location of Required Disposal Strips may be adjusted from side to side without materially changing the total work required.

Slash treatment in Required Disposal Strips shall be accomplished without affecting the proper functioning of channels leading to and from drainage structures.

Logging Slash larger than treatment size requirements of the specified method shall either be Scattered outside Required Disposal Strip, within Required Disposal Strip or Decked at agreed locations as shown in the attached table.

			<b>SLASH TREATMENT</b>	
<b>Road No.</b>	<b>Subdivision and/ or Unit No. or Road Junctions (From To)</b>	<b>Width of Required Disposal Strip</b>	<b>Specified Method</b>	<b>Slash Larger Than Treatment Size Requirements of Specified Method</b>

**TREATMENT ALONG TEMPORARY ROADS.** Outside of Clearcutting Units or regeneration units, all trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem d.o.b. of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into lengths not exceeding <> feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

**ADDITIONAL SLASH TREATMENT REQUIREMENTS.** Within areas shown on Sale Area Map, Purchaser shall perform work according to the specifications in the attached Table, unless otherwise agreed in writing.

Subdivision, Payment Units, Roads and or Road Segments	Additional Slash Treatment Requirements
	<p>Yard all stem material to a top d.o.b. of 1 inch, from timber designated for cutting, with the following exception: broken portions of logs and tops less than 4 feet in length need not be yarded.</p> <p>Broken ends of merchantable logs shall not be bucked off in the units.</p> <p>Slash and Substandard Material accumulated at the landings shall be Decked or Machined Piled, in accordance with specifications above.</p> <p>Material accumulated at landings shall be considered as Timber Subject to Agreement under CT2.11#, described as Substandard</p>

	Material and may be removed and paid for at Purchaser's option.
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ASSISTANCE IN SLASH BURNING. If Forest Service requests, Purchaser shall furnish equipment and equipment operators to assist in preparation for slash burning at agreed times prior to the normal slash burning season in the area.

Purchaser shall furnish equipment and equipment operators for burning and mop-up when requested. The amount and kind of equipment requested shall be that normally used in slash treatment work and reasonably available under the existing equipment organization of Purchaser. Forest Service shall reimburse Purchaser for such work at rates common in the area or at previously agreed rates.

List of Volume Tables (CT6.8-1#)

<u>Species</u>	<u>Name of Table</u>	<u>Date</u>
Incense Cedar	R-5 Cubic Foot Volume Tables to a Utilization Top	9/97
Ponderosa Pine	R-5 Cubic Foot Volume Tables to a Utilization Top	9/97
White Fir	R-5 Cubic Foot Volume Tables to a Utilization Top	9/97

Values listed in the table are in gross volumes to a utilization (utilizable) top. Use standard deduction methods described in the Timber Cruising Handbook (FSH 2409.12), Region 5 Supplements.

Sale Name: Grouser  
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REGION 5 CUBIC FOOT VOLUME TABLES TO A UTILIZATION TOP  
NATIONAL CRUISE PROGRAM  
PONDEROSA PINE  
SEPTEMBER 1997

HEIGHT/DBH	8	10	12	14	16	18	20	22	24	26	28	30
20	0	0	0	5	6	9	11	12	15	18	21	24
30	0	3	6	8	10	15	17	22	26	31	37	40
40	0	4	8	12	15	21	25	31	36	41	52	57
50	3	6	9	14	19	24	32	39	47	55	65	72
60	3	7	12	17	24	30	39	48	57	65	80	90
70	4	10	14	22	27	37	44	55	67	78	92	108
80	4	11	15	24	30	40	53	64	77	89	106	119
90	5	12	16	26	37	46	57	72	87	100	119	138
100	6	14	20	30	40	49	65	80	97	113	131	152
110	6	15	23	33	43	60	69	89	105	124	145	166
120	7	16	24	36	48	63	78	96	118	134	163	186
130	8	17	26	38	51	70	82	105	126	143	174	203
140	8	20	28	43	55	75	90	114	134	155	187	218



REGION 5 CUBIC FOOT VOLUME TABLES TO A UTILIZATION TOP  
NATIONAL CRUISE PROGRAM  
WHITE FIR  
SEPTEMBER 1997

HEIGHT/DBH	8	10	12	14	16	18	20	22	24	26	28	30
20	0	0	0	5	6	9	11	12	15	18	20	24
30	0	4	6	7	10	15	18	22	26	31	35	40
40	2	5	8	12	15	21	25	30	35	41	50	55
50	0	7	10	15	20	26	32	39	47	52	62	72
60	0	9	12	18	24	30	39	48	57	64	77	85
70	0	0	14	22	28	37	44	55	65	78	89	101
80	0	0	0	25	34	43	53	65	75	89	106	119
90	0	0	0	0	39	47	60	72	85	103	117	135
100	0	0	0	0	0	58	67	85	96	113	131	150
110	0	0	0	0	0	0	77	93	107	124	145	166
120	0	0	0	0	0	0	82	105	122	137	163	180
130	0	0	0	0	0	0	0	114	134	151	178	203

140	0	0	0	0	0	0	0	0	150	170	196	221
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REGION 5 CUBIC FOOT VOLUME TABLES TO A UTILIZATION TOP  
NATIONAL CRUISE PROGRAM  
INCENSE CEDAR  
SEPTEMBER 1997

HEIGHT/DBH	8	10	12	14	16	18	20	22	24	26	28	30
20	0	0	0	0	0	6	8	11	13	16	17	19
30	0	3	4	6	8	11	13	18	19	24	29	33
40	0	4	5	8	11	15	19	25	28	33	39	46
50	0	4	7	11	16	19	24	31	35	41	51	59
60	0	5	8	13	18	23	29	36	43	51	60	72
70	0	6	9	15	21	29	33	43	51	60	73	84
80	2	7	11	18	22	31	40	49	57	67	79	95
90	2	8	11	20	25	36	43	54	66	76	93	105
100	3	9	14	21	29	39	48	62	70	85	103	115
110	3	10	15	24	33	42	51	66	78	91	108	128
120	3	11	16	26	34	44	58	73	87	99	116	140
130	3	11	17	27	36	48	62	77	93	105	128	148
140	4	12	18	28	38	54	64	81	101	114	134	157



**A. Fire Tools and Equipment**

Purchaser shall meet applicable parts of Section 4428 of the California Public Resources Code (CPRC).

Unless agreed otherwise, Fire tools kept at each Active Landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Purchaser's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. Fire tools shall be kept in a sealed weather proof fire tool box adjacent to the Active Landing and readily accessible in event of fire. The tool box shall be painted red and have "Fire Tools" written on the box in 3-4 inch letters.

Where cable yarding is used, Purchaser shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a serviceable 5 gallon backpack pump filled with water or a fire extinguisher bearing a label showing at least a 4-A rating must be within 25 feet of each tail and corner block.

Trucks, tractors/skidlers, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

The fire patrol vehicle shall be equipped to fight fire with the following: 1) a serviceable 5 gallon backpack pump filled with water, 2) a shovel or McLeod fire tool, 3) either a double bit ax or serviceable chainsaw with a minimum 20-inch bar, and 4) serviceable communications equipment (CT7.2 Item O).

All required fire tools shall be maintained in suitable and serviceable condition for fire fighting purposes.

**B. Fire Extinguishers**

Purchaser shall equip each internal combustion yarder, fuel truck, and loader with a (4-A:60-B:C) fire extinguisher for oil and grease fires.

Log trucks, pickups and other similar mobile equipment, including skidders and tractors, shall be equipped with a minimum 5-BC fire extinguisher.

Fire extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Purchaser shall equip all mechanized harvesting machines and log processors with hydraulic systems, powered by an internal combustion engine (e.g. masticator, chipper, feller/buncher, harvester, forwarder, Hot Saw, stroke delimber, etc), with at least two 4-A:60-B:C fire extinguishers or equivalent. (CT7.2 Item M)

**C. Spark Arresters and Mufflers**

Except for tractors and other equipment with exhaust-operated turbochargers, Purchaser shall equip each operating tractor and any other internal combustion engine with an approved spark arrester. There shall be no exhaust bypass on any system.

Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildfire Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be properly mounted and maintained according to manufacturer's specifications.

Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.

D. Power Saws

Each power saw shall be equipped with a spark arrester approved and maintained in effective working order as identified in the Spark Arrester Guide in C above and according to applicable parts of CPRC Section 4442 or 4443. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating saw, unless provided otherwise in CPRC Section 4431.

A size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can, but not more than 300 feet from each power saw when used off cleared landing areas.

E. Fire Supervisor & Fire Patrolperson

Purchaser shall designate in the fire plan required by B(T)7.1 and furnish on Sale Area during operating hours a fire supervisor, named in writing and authorized to act on behalf of Purchaser in fire prevention and suppression matters.

Unless agreed otherwise, Purchaser shall furnish and designate in writing, a Fire Patrolperson each operating day when Project Activity Level B or higher is in effect. When on duty, the Fire Patrolperson is required to patrol the operation for the prevention and detection of fires, to take suppression action where necessary, to document the areas covered during the patrol with approximate times of the coverage in each area, and to notify the Forest Service as required under Items K. Reporting Fires and N. Communications.

By written agreement, one Fire Patrolperson may provide patrol on this and adjacent projects or sales. No Fire Patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

On operations utilizing mechanized harvesters with High Speed Rotary Saws (Hot saws) or Masticators, the patrol will conduct inspections using an approach capable of detecting small smoldering fires. The patrol must cover, on foot, the area worked that day. The patrol's vehicle shall be parked within or as closely as possible to the area being patrolled. The patrol shall carry a round point shovel with an overall length of at least 46 inches during the patrol.

F. Seasonal Permits Purchaser shall obtain written permits from Forest Service before allowing attended warming fires, burning, or blasting, subject to C(T)7.22# – Emergency Precautions. In addition, Purchaser shall obtain necessary Explosives Permits as required by California Health and Safety Code, Section 12101.

G. Blasting Purchaser shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a watchperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.

H. Clearing of Fuels Purchaser shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	During the period when burning permits are required, all tail and side blocks on a cable setting shall be located in the the center of an area that is either cleared to mineral soil or covered with a fireproof blanket that is at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.
Skidders, Harvesters, Chippers, Masticators and other similar equipment:	Remove concentrations of wood dust and debris from such equipment daily.
Mechanized harvesters with High Speed Rotary Saws (Hot Saws)	Equipment operators are required to assure that if wood debris or chips are accumulating in the cutting head, they clean out the blade guard no less frequently than every two hours during operations.

I. Oil Filters and Glass Jugs Purchaser shall remove from National Forest lands oily rags and used oil filters and shall prohibit use of glass bottles and jugs in Purchaser's Operations.

All smoking shall be confined within a car, truck, crew rig or other enclosed cab after 1:00 PM on Ev days and all hours on E days (CT7.22#). At other times, any smoking shall be done while sitting in an area at least 3 feet in diameter, cleared of flammable materials.

As soon as feasible, but no later than 15 minutes after discovery, Purchaser shall notify Forest Service of any fires on Sale Area or along roads used by Purchaser.

(1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Sale Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit or an equivalent water flow test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

[illegible]



The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

(2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.

(3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

(4) Sufficient fuel to run pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

(5) Ample power and hitch shall be readily accessible for promptly and safely moving tank truck or trailer over roads serving Sale Area or terrain traveled by Hotsaws or masticators.

(6) When Purchaser is using Mechanized harvesters with High Speed Rotary Saws (Hot Saws) or Masticators, an additional 250 feet of comparable hose shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurturances in (2) and (3) above. Additional hose lengths shall not exceed 100 feet in length.

M. Compressed Air  
Foam System  
(CAFS)

By agreement, Purchaser may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

1. Variable foam expansion ratio – 10:1 to 20:1.
2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellent.
4. The unit shall be capable of being completely recharged within 10 minutes.
5. When used on yarder landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, masticators and similar equipment

identified in B. above may be substituted with a CAFS that provides a minimum of 3 gallons of water and has a minimum discharge range of 20 feet. The system must have enough water, air and foam concentrate to recharge the system once.

Tank truck, trailer, All Terrain Tank Truck or Equivalent may be substituted with a CAFS. Systems shall provide a minimum of 60 gallons stored energy with 500 feet of one inch hose, an adjustable one inch nozzle providing a minimum discharge range of 70 feet and must have enough water; air and foam concentrate for a minimum of two recharges or a system that provides a minimum of 30 gallons stored energy with enough water; air and foam concentrate for a minimum of five recharges. Systems shall be mobile, readily accessible and equipped so that it can be moved safely over Sale Area roads or terrain traveled by Hot Saws or masticators.

If, in the opinion of the Contracting Officer, it becomes apparent that this equipment cannot provide fire protection equal to the tank truck or trailer listed above, the Contracting Officer will rescind this substitution of requirements.

N. Portable Fire Tank

By agreement, Purchaser may substitute a Portable Fire Tank in lieu of the tank truck or trailer. A portable water tank, pump and accessories that meets all C(T) 7.2# Tank Truck minimum specifications, with the exception of the live reel, plus a charged hose lay within 200 feet of operations and enough additional hose on site to complete the hose lay to where the Hotsaw or masticator is working.

O. Communications

Purchaser shall furnish a serviceable communications system such as a telephone, radio-telephone, radio system or satellite phone connecting each operating side within the Sale Area with Purchaser's headquarters, and capable of notifying Forest Service within 15 minutes of discovery of any fires on the Sale Area or along Purchaser's haul route. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may agree to a reasonable alternative notification method.

The communication system shall provide prompt and reliable communications during all hours of operations, including fire patrol person, between Purchaser's headquarters or the agreed to alternative notification method and Forest Service during the Fire Precautionary Period.

A Citizen's Band (CB) radio is not acceptable communication for timber sale operations as FCC Regulations prohibit commercial use.

P. Skyline Tank Unit When all or part of Included Timber will be yarded by a long span (over 1,500 feet) skyline, Purchaser shall provide at each active skyline landing a suitable tank trailer, or tank unit or CAFS which can be lifted and transported by the skyline carriage.

The unit shall meet the same requirements as specified for the water tank truck or trailer or approved substitute.

The CAFS shall be located and outfitted for immediate use at the landing, and equipped for undamaged delivery to any portion of the operation by use of the rigging system.

The tank unit or CAFS shall be deliverable to a fire, in the area of skyline operations, within 15 minutes of detection.

Q. Helicopter  
Yarding Fire  
Precautions

Purchaser shall provide and maintain fire equipment as follows:

1. The fire tool box required under this provision shall be equipped for attachment to the helicopter long line so that it may be hauled to needed locations. Such attachment device shall not interfere with access to fire tools. Unless agreed otherwise, the fire tool box shall be located at the Active Landing ready for immediate dispatch.
2. An external helibucket readily attachable to the helicopter, with a capacity of at least 500 gallons, and having a remote control door mechanism adequate for rapid dropping of water. The helibucket shall be located at the helicopter service landing and shall be filled with water ready for immediate dispatch unless otherwise agreed.
3. All aircraft used in conjunction with Purchaser's Operations shall be equipped with an operable radio system capable of meeting Region Five avionics requirements.
4. For protection of fuel servicing operations, fire extinguishers which have the following ratings based on the open hose discharge capacity, i.e., "broken hose," of the aircraft fueling system shall be readily available:
  - a. Where said capacity does not exceed 200 gallons per minute, at least one approved extinguisher having a minimum rating of 20-B;
  - b. Where said capacity is in excess of 200 gallons per minute, but not over 350 gallons per minute, one approved extinguisher having a minimum rating of 80-B;
  - c. Where said capacity is in excess of 350 gallons per minute, two approved extinguishers, each having a minimum rating of 80-B.
5. By agreement, a suitable CAFS may also be used in lieu of the above extinguishers.
6. Extinguishers of over 50 pounds gross weight shall be of wheeled type or be mounted on carts to provide mobility and ease of handling.

PROJECT ACTIVITY LEVEL (PAL) – CT7.22# - EMERGENCY PRECAUTIONS**PROJECT ACTIVITY LEVEL TABLE**

<b>Level</b>	<b><i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i></b>
<b>A</b>	Minimum required by CT7.2#.
<b>B</b>	<ol style="list-style-type: none"> <li>1. Fire Patrolperson is required for at least one hour after operations cease, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day.(CT7.2#)</li> <li>2. Tank truck, trailer, or comparable CAFS, shall be on or within 10 roundtrip minutes road travel to each Active Landing. (CT7.2#)</li> <li>3. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) and Masticators: <ol style="list-style-type: none"> <li>A. Fire patrol is required throughout the first two hours after cessation of felling, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day (CT7.2#).</li> <li>B. Equipment operating within one quarter mile of the Active Landing. <ol style="list-style-type: none"> <li>1) All Terrain Tank Truck, trailer or comparable CAFS shall be on or within ten (10) roundtrip minutes to each Active Landing.</li> <li>2) Serviceable Communications shall exist between the equipment operators, landing personnel, and designated Fire Supervisor.</li> </ol> </li> <li>C. Equipment operating beyond one quarter mile of the Active Landing. <ol style="list-style-type: none"> <li>1) In addition to the above requirements, an approved CAFS with minimum requirements of 20 gallons stored energy, 100 feet of 1 inch hose and adjustable 1 inch nozzle, minimum discharge range of 60 feet(CT7.2#,Item M) or equivalent within the Immediate Vicinity of the equipment is required.</li> </ol> </li> <li>D. Equipment operating independently without an Active Landing. <ol style="list-style-type: none"> <li>1) All Terrain Tank Truck or Equivalent shall be within the Immediate Vicinity of the equipment.</li> <li>2) Serviceable Communications shall exist between the equipment operators, Purchaser's main office and designated Fire Supervisor (CT7.2#, Item O).</li> </ol> </li> </ol> </li> </ol>
<b>C</b>	<p>The following operations are prohibited from 1:00 PM until 8:00 PM except as noted:</p> <ol style="list-style-type: none"> <li>a. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) and Masticators – except that Hot Saws and masticators may operate between 1:00 PM and 8:00 PM provided that an All Terrain Tank Truck or Equivalent or comparable CAFS shall be within the Immediate Vicinity of the equipment.</li> <li>b. Blasting</li> <li>c. Dead tree felling, except recently dead.</li> </ol>
<b>D</b>	<p>The following restrictions apply:</p> <ol style="list-style-type: none"> <li>1. The following activities may operate when a Fire Patrolperson(s) walks all areas operated that day, starting at 1:00 PM, at least once per hour until sunset: <ol style="list-style-type: none"> <li>a) Track-laying equipment in skidding, erosion control, felling, and piling operations.</li> <li>b) Chipping outside of approved landings and roadbeds.</li> <li>c) Cable Yarding with Approved Motorized Carriages. Carriage shall remain a minimum of ten feet above the ground at all times, except while at the landing.</li> <li>d) Mechanical limbing and log manufacturing outside of approved landings and roadbeds.</li> <li>e) Ripping roads and landings, sub soiling and water barring.</li> <li>f) Chainsaw operations outside of approved landings and roadbeds.</li> </ol> </li> </ol>

	<ol style="list-style-type: none"> <li>2. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) and Masticators may operate; provided that: <ol style="list-style-type: none"> <li>a) An All Terrain Tank Truck or Equivalent shall be within the Immediate Vicinity of the equipment.</li> <li>b) Within the first hour of mechanized harvester operation and at least once per hour until sunset, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day.</li> </ol> </li> <li>3. No blasting after 10:00 AM.</li> <li>4. Welding or cutting of metal only by special permit.</li> <li>5. No burning.</li> </ol>
<b>Ev</b>	<ol style="list-style-type: none"> <li>1. The following operations are prohibited: <ol style="list-style-type: none"> <li>a) Blasting.</li> <li>b) Welding or cutting metal.</li> <li>c) Burning.</li> <li>d) Smoking outside a vehicle.</li> </ol> </li> <li>2. The following activities may operate all day: <ol style="list-style-type: none"> <li>a) Loading and hauling logs decked at approved landings.</li> <li>b) Loading and hauling chips stockpiled at approved landings.</li> <li>c) Servicing equipment at approved sites.</li> <li>d) Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development).</li> <li>e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings.</li> </ol> </li> <li>3. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) or Masticators may operate until 1:00 PM; provided that: <ol style="list-style-type: none"> <li>a) An All Terrain Tank Truck or Equivalent shall be within the Immediate Vicinity of the equipment</li> <li>b) Within the first hour of mechanized harvester operation and at least once per hour until sunset, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day.</li> </ol> </li> <li>4. All other Mechanical Operations are permitted until 1:00 PM when a Fire Patrolperson(s) walks all areas operated that day, starting at 9:00 AM, at least once per hour and continues until at least two hours after Mechanical Operations cease.</li> <li>5. Some operations, on a case-by-case basis, may be permitted after 1:00 PM under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are limited to the following operations: <ul style="list-style-type: none"> <li>• Rubber tire skidding</li> <li>• Chipping on Landings</li> <li>• Helicopter Yarding.</li> </ul> <p>When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of the Forest Service. Variance approval is contingent on the 10-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Purchaser's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).</p> </li> </ol>



SPECIFICATIONS PURSUANT TO CT7.22# – EMERGENCY PRECAUTIONS. (10/2010)

**Region 5 Project Activity Level (PAL) Ev Variance Application/Agreement**

Project Name: \_\_\_\_\_  
Contract Number: \_\_\_\_\_  
Purchaser/Contractor Name: \_\_\_\_\_  
Request # \_\_, for period: \_\_\_\_\_  
Units/Subdivisions Affected: \_\_\_\_\_

<b>Location of operation:</b>	
Slope	
Aspect	
Elevation	
Fuels on site	
Fuels in surrounding area	
10 day Forecast	
Short range predictions (Red Flags)	
<i>Fuel Moistures</i>	
Response time of suppression resources	
Potential for ignition	
RAWS location	
<b>Current Fire Situation:</b>	
Draw down information	
National Readiness Level	
<b>Contractual considerations:</b>	
Normal Operating Season	
Frequency of recent contract fires in area	
Type of operation	
Purchaser/Contractors past/current performance & equipment readiness	
Other site specific mitigation or precaution (i.e. Purchaser/Contractors proposals)	
<b>Social &amp; Community Considerations:</b>	
Proximity of high value resources	
Sensitivity of location	
<b>Remarks:</b>	

## Ev Proposed Actions

☐ Rubber Tired Skidding

#### ☐ Chipping on Landings

## ☐ Helicopter Yarding

### Description of Mitigation Measures

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Fire Management Officer Concurrence

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Date

Line Officer Approval

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Date

I have considered the above request and determined the specified mitigation measures or actions must be implemented to continue operations in Project Activity Level Ev. Unless extended, the approval remains in effect for ten (10) calendar days unless cancelled sooner or extended by the Forest Service for an additional ten (10) days. At the sole discretion of the Forest Service, this variance can be modified and/or cancelled at no cost to the government.

Contracting Officer

Date \_\_\_\_\_

Purchaser/Contractor Rep.

Date \_\_\_\_\_